

SEQUENCE LISTING

<110> Thayer, Edward C.
Webster, Philippa J.

<120> Human Secreted Protein, Zzp1

<130> 00-54

<150> 60/222,814

<151> 2000-08-04

<150> 60/260,512

<151> 2001-01-09

<160> 5

<170> FastSEQ for Windows Version 4.0

 $\langle 210 \rangle$ 1

<211> 1908

<212> DNA

<213> Homo sapiens

 $\langle 220 \rangle$

<221> CDS

<222> (1)...(1908)

 $\langle 400 \rangle$ 1

atg gca gga ggc tca gcc acg acc tgg ggt tac cct gtg gcc ctg cta 48
Met Ala Gly Gly Ser Ala Thr Thr Trp Gly Tyr Pro Val Ala Leu Leu
1 5 10 15

ctg ctg gtt gcc acc ctg ggg ctg ggt agg tgg ctc cag ccc gac cca 96
Leu Leu Val Ala Thr Leu Gly Leu Gly Arg Trp Leu Gln Pro Asp Pro
20 25 30

ggc ctc cgg cac agc tac gac tgt ggg atc aag gga atg cag ctg ctg 144
Gly Leu Arg His Ser Tyr Asp Cys Gly Ile Lys Gly Met Gln Leu Leu
35 40 45

gtg	ttc	ccc	agg	cca	ggc	cag	act	ctc	cgc	ttc	aag	gtg	gtg	gat	gaa	192
Val	Phe	Pro	Arg	Pro	Gly	Gln	Thr	Leu	Arg	Phe	Lys	Val	Val	Asp	Glu	
50			55			60										
ttt	ggg	aac	cga	ttt	gat	gtc	aac	aac	tgc	tcc	atc	tgc	tac	cac	tgg	240
Phe	Gly	Asn	Arg	Phe	Asp	Val	Asn	Asn	Cys	Ser	Ile	Cys	Tyr	His	Trp	
65			70			75			80							
gtc	acc	tcc	agg	ccg	cag	gag	cct	gca	gtc	ttc	tcg	gcc	gat	tac	aga	288
Val	Thr	Ser	Arg	Pro	Gln	Glu	Pro	Ala	Val	Phe	Ser	Ala	Asp	Tyr	Arg	
85				90			95									
ggc	tgc	cac	gtg	ctg	gag	aag	gat	ggg	cgt	ttc	cac	ctg	agg	gtg	ttc	336
Gly	Cys	His	Val	Leu	Glu	Lys	Asp	Gly	Arg	Phe	His	Leu	Arg	Val	Phe	
100			105			110										
atg	gag	gct	gtg	ctg	ccc	aat	ggg	cgt	gtg	gat	gtg	gca	caa	gac	gct	384
Met	Glu	Ala	Val	Leu	Pro	Asn	Gly	Arg	Val	Asp	Val	Ala	Gln	Asp	Ala	
115			120			125										
act	ctg	atc	tgt	ccc	aaa	cct	gac	ccc	tcc	cgg	act	ctg	gac	tcc	cag	432
Thr	Leu	Ile	Cys	Pro	Lys	Pro	Asp	Pro	Ser	Arg	Thr	Leu	Asp	Ser	Gln	
130			135			140										
ctg	gca	cca	ccc	gcc	atg	ttc	tct	gtc	tca	acc	cca	caa	acc	ctt	tcc	480
Leu	Ala	Pro	Pro	Ala	Met	Phe	Ser	Val	Ser	Thr	Pro	Gln	Thr	Leu	Ser	
145			150			155			160							
ttc	ctc	ccc	acc	tct	ggc	cat	acc	tcc	caa	ggc	tct	ggc	cat	gcc	ttt	528
Phe	Leu	Pro	Thr	Ser	Gly	His	Thr	Ser	Gln	Gly	Ser	Gly	His	Ala	Phe	
165				170			175									
ccc	agc	cca	ctg	gac	cca	ggg	cac	agc	tct	gtc	cac	cca	acc	cct	gct	576
Pro	Ser	Pro	Leu	Asp	Pro	Gly	His	Ser	Ser	Val	His	Pro	Thr	Pro	Ala	
180			185			190										
tta	cca	tcc	cct	gga	cct	gga	cct	acc	ctc	gcc	acc	ctg	gct	caa	ccc	624
Leu	Pro	Ser	Pro	Gly	Pro	Gly	Pro	Thr	Leu	Ala	Thr	Leu	Ala	Gln	Pro	
195			200			205										
cac	tgg	ggc	acc	ttg	gaa	cac	tgg	gat	gtg	aac	aaa	cga	gat	tac	ata	672
His	Trp	Gly	Thr	Leu	Glu	His	Trp	Asp	Val	Asn	Lys	Arg	Asp	Tyr	Ile	
210			215			220										

ggg Gly 225	acc Thr 225	cac His 225	ctg Leu 225	agc Ser 230	cag Gln 230	gag Glu 230	cag Gln 235	tgc Cys 235	cag Gln 235	gtg Val 235	gcc Ala 235	tca Ser 240	ggg Gly 240	cac His 240	ctc Leu 240	720	
ccc Pro	tgc Cys	atc Ile	gtg Val	aga Arg 245	aga Arg	act Thr	tca Ser	aaa Lys	gaa Glu 250	gcc Ala	tgt Cys	cag Gln	cag Gln	gct Ala	ggc Gly	255	768
tgc Cys	tgc Cys	tat Tyr	gac Asp 260	aac Asn	acc Thr	aga Arg	gag Glu	gtt Val 265	ccc Pro	tgt Cys	tac Tyr	tat Tyr	ggc Gly	aac Asn	aca Thr	270	816
gct Ala	act Thr	gtc Val 275	cag Gln	tgc Cys	ttc Phe	aga Arg	gat Asp	ggc Gly	tac Tyr	ttc Phe	gtc Val	ctc Leu	gta Val	gtg Val	tcc Ser	280	864
caa Gln 290	gaa Glu	atg Met	gcc Ala	ttg Leu	aca Thr	cac His 295	agg Arg	atc Ile	aca Thr	ctg Leu	gcc Ala 300	aac Asn	atc Ile	cac His	ctg Leu	305	912
gcc Ala 305	tat Tyr	gcc Ala	ccc Pro	acc Thr	agc Ser 310	tgc Cys	tcc Ser	cca Pro	aca Thr	cag Gln	cac His	acg Thr	gaa Glu	gct Ala	ttc Phe 320	315	960
gtg Val	gtc Val	ttc Phe	tac Tyr	ttc Phe 325	cct Pro	ctc Leu	acc Thr	cac His	tgt Cys 330	gga Gly	acc Thr	aca Thr	atg Met	cag Gln	gtg Val	335	1008
gct Ala	ggc Gly	gac Asp	cag Gln	ctc Leu	atc Ile	tat Tyr	gag Glu	aac Asn	tgg Trp	ctg Leu	gtg Val	tct Ser	ggc Gly	atc Ile	cac His	340	1056
atc Ile	caa Gln	aag Lys 355	ggg Gly	cca Pro	cag Gln	ggt Gly	tcc Ser	atc Ile	acg Thr	cgg Arg	gac Asp	agc Ser	acc Thr	ttc Phe	cag Gln	360	1104
ctt Leu	cat His 370	gtg Val	cgc Arg	tgt Cys	gtc Val	ttc Phe	aac Asn	gcc Ala	agt Ser	gac Asp	ttc Phe	ctg Leu	ccc Pro	att Ile	cag Gln	375	1152

gca	tcc	att	ttc	cca	ccc	cca	tcg	cct	gct	cct	atg	acc	cag	ccc	ggc	1200
Ala	Ser	Ile	Phe	Pro	Pro	Pro	Ser	Pro	Ala	Pro	Met	Thr	Gln	Pro	Gly	
385					390					395					400	
ccc	ctg	cgg	ctt	gag	ctg	cgg	att	gcc	aaa	gac	gag	acc	tgc	agc	tcg	1248
Pro	Leu	Arg	Leu	Glu	Leu	Arg	Ile	Ala	Lys	Asp	Glu	Thr	Cys	Ser	Ser	
				405					410					415		
tac	tat	ggg	gag	gat	gac	tat	ccc	atc	gtg	agg	ctg	ctc	cga	gaa	cca	1296
Tyr	Tyr	Gly	Glu	Asp	Asp	Tyr	Pro	Ile	Val	Arg	Leu	Leu	Arg	Glu	Pro	
			420					425					430			
gtc	cat	gtg	gag	gtc	cgg	ctt	ctg	cag	agg	aca	gac	ccc	aac	ctg	gtc	1344
Val	His	Val	Glu	Val	Arg	Leu	Leu	Gln	Arg	Thr	Asp	Pro	Asn	Leu	Val	
		435					440					445				
ctg	ctg	ctg	cac	cag	tgc	tgg	ggc	gct	ccc	agt	gcc	aac	ccc	ttc	cag	1392
Leu	Leu	Leu	His	Gln	Cys	Trp	Gly	Ala	Pro	Ser	Ala	Asn	Pro	Phe	Gln	
	450					455					460					
cag	ccc	cag	tgg	ccc	atc	ctg	tca	gac	ggc	tgc	cct	ttc	aag	ggc	gac	1440
Gln	Pro	Gln	Trp	Pro	Ile	Leu	Ser	Asp	Gly	Cys	Pro	Phe	Lys	Gly	Asp	
465					470					475					480	
agc	tac	aga	acc	caa	atg	gta	gcc	ttg	gac	ggg	gcc	aca	cct	ttc	cag	1488
Ser	Tyr	Arg	Thr	Gln	Met	Val	Ala	Leu	Asp	Gly	Ala	Thr	Pro	Phe	Gln	
				485					490						495	
tcg	cac	tac	cag	cga	ttc	act	gtt	gct	acc	ttc	gcc	ctc	ctg	gac	tca	1536
Ser	His	Tyr	Gln	Arg	Phe	Thr	Val	Ala	Thr	Phe	Ala	Leu	Leu	Asp	Ser	
			500					505					510			
ggc	tcc	cag	aga	gcc	ctc	aga	gga	ctg	gtt	tac	ttg	ttc	tgc	agc	acc	1584
Gly	Ser	Gln	Arg	Ala	Leu	Arg	Gly	Leu	Val	Tyr	Leu	Phe	Cys	Ser	Thr	
		515					520					525				
tct	gcc	tgc	cac	acc	tca	ggg	ctg	gag	act	tgc	tcc	act	gca	tgt	agc	1632
Ser	Ala	Cys	His	Thr	Ser	Gly	Leu	Glu	Thr	Cys	Ser	Thr	Ala	Cys	Ser	
	530					535					540					
act	ggc	act	aca	aga	cag	cga	cga	tcc	tca	ggt	cac	cgt	aat	gac	act	1680
Thr	Gly	Thr	Thr	Arg	Gln	Arg	Arg	Ser	Ser	Gly	His	Arg	Asn	Asp	Thr	
545					550					555					560	

gat tct tat ggg cag gag ccc aca ctt ggg ccc aca gac tcc aat ggg 1776
Asp Ser Tyr Gly Gln Glu Pro Thr Leu Gly Pro Thr Asp Ser Asn Gly
580 585 590

aac tcc agc ctg aga cct ctc ctt tgg gcg gtc ctt ttg ctg cca gct 1824
Asn Ser Ser Leu Arg Pro Leu Leu Trp Ala Val Leu Leu Leu Pro Ala
595 600 605

gtt gcc ctg gtc ctt ggg ttt ggt gtc ttt gtg ggc ctg agc cag acc 1872
Val Ala Leu Val Leu Gly Phe Gly Val Phe Val Gly Leu Ser Gln Thr
610 615 620

tgg gcc cag aag ctc tgg gaa agc aac aga cag tga 1908
Trp Ala Gln Lys Leu Trp Glu Ser Asn Arg Gln *
625 630 635

```
<210> 2
<211> 635
<212> PRT
<213> Homo sapiens
```

<400> 2
Met Ala Gly Gly Ser Ala Thr Thr Trp Gly Tyr Pro Val Ala Leu Leu
1 5 10 15
Leu Leu Val Ala Thr Leu Gly Leu Gly Arg Trp Leu Gln Pro Asp Pro
20 25 30
Gly Leu Arg His Ser Tyr Asp Cys Gly Ile Lys Gly Met Gln Leu Leu
35 40 45
Val Phe Pro Arg Pro Gly Gln Thr Leu Arg Phe Lys Val Val Asp Glu
50 55 60
Phe Gly Asn Arg Phe Asp Val Asn Asn Cys Ser Ile Cys Tyr His Trp
65 70 75 80
Val Thr Ser Arg Pro Gln Glu Pro Ala Val Phe Ser Ala Asp Tyr Arg
85 90 95
Gly Cys His Val Leu Glu Lys Asp Gly Arg Phe His Leu Arg Val Phe
100 105 110

Met	Glu	Ala	Val	Leu	Pro	Asn	Gly	Arg	Val	Asp	Val	Ala	Gln	Asp	Ala	
	115						120					125				
Thr	Leu	Ile	Cys	Pro	Lys	Pro	Asp	Pro	Ser	Arg	Thr	Leu	Asp	Ser	Gln	
	130						135				140					
Leu	Ala	Pro	Pro	Ala	Met	Phe	Ser	Val	Ser	Thr	Pro	Gln	Thr	Leu	Ser	
145					150					155					160	
Phe	Leu	Pro	Thr	Ser	Gly	His	Thr	Ser	Gln	Gly	Ser	Gly	His	Ala	Phe	
				165					170					175		
Pro	Ser	Pro	Leu	Asp	Pro	Gly	His	Ser	Ser	Val	His	Pro	Thr	Pro	Ala	
			180					185					190			
Leu	Pro	Ser	Pro	Gly	Pro	Gly	Pro	Thr	Leu	Ala	Thr	Leu	Ala	Gln	Pro	
	195						200					205				
His	Trp	Gly	Thr	Leu	Glu	His	Trp	Asp	Val	Asn	Lys	Arg	Asp	Tyr	Ile	
	210					215					220					
Gly	Thr	His	Leu	Ser	Gln	Glu	Gln	Cys	Gln	Val	Ala	Ser	Gly	His	Leu	
225					230					235					240	
Pro	Cys	Ile	Val	Arg	Arg	Thr	Ser	Lys	Glu	Ala	Cys	Gln	Gln	Ala	Gly	
				245					250					255		
Cys	Cys	Tyr	Asp	Asn	Thr	Arg	Glu	Val	Pro	Cys	Tyr	Tyr	Gly	Asn	Thr	
			260					265					270			
Ala	Thr	Val	Gln	Cys	Phe	Arg	Asp	Gly	Tyr	Phe	Val	Leu	Val	Val	Ser	
		275					280					285				
Gln	Glu	Met	Ala	Leu	Thr	His	Arg	Ile	Thr	Leu	Ala	Asn	Ile	His	Leu	
	290					295					300					
Ala	Tyr	Ala	Pro	Thr	Ser	Cys	Ser	Pro	Thr	Gln	His	Thr	Glu	Ala	Phe	
305					310					315					320	
Val	Val	Phe	Tyr	Phe	Pro	Leu	Thr	His	Cys	Gly	Thr	Thr	Met	Gln	Val	
				325					330					335		
Ala	Gly	Asp	Gln	Leu	Ile	Tyr	Glu	Asn	Trp	Leu	Val	Ser	Gly	Ile	His	
			340					345					350			
Ile	Gln	Lys	Gly	Pro	Gln	Gly	Ser	Ile	Thr	Arg	Asp	Ser	Thr	Phe	Gln	
	355						360					365				
Leu	His	Val	Arg	Cys	Val	Phe	Asn	Ala	Ser	Asp	Phe	Leu	Pro	Ile	Gln	
	370					375					380					
Ala	Ser	Ile	Phe	Pro	Pro	Pro	Ser	Pro	Ala	Pro	Met	Thr	Gln	Pro	Gly	
385					390					395					400	
Pro	Leu	Arg	Leu	Glu	Leu	Arg	Ile	Ala	Lys	Asp	Glu	Thr	Cys	Ser	Ser	
				405					410					415		
Tyr	Tyr	Gly	Glu	Asp	Asp	Tyr	Pro	Ile	Val	Arg	Leu	Leu	Arg	Glu	Pro	
			420					425					430			
Val	His	Val	Glu	Val	Arg	Leu	Leu	Gln	Arg	Thr	Asp	Pro	Asn	Leu	Val	
	435						440					445				

```
<210> 3
<211> 1905
<212> DNA
<213> Artificial Sequence

<220>
<223> degenerate nucleotide sequence

<221> misc_feature
<222> 6, 9, 12, 15, 18, 21, 24, 30, 36, 39, 42, 45, 48, 51, 54,
57, 60, 63, 66, 69, 72, 75, 78, 84, 90, 96, 99, 102, 105,
111, 123, 132, 141, 144, 147, 153, 156, 159, 162, 168, 171,
174, 183, 186, 198, 204, 213, 225, 243, 246, 249, 252
<223> n = A,T,C or G

<221> misc_feature
<222> 255, 264, 267, 270, 276, 279, 288, 291, 300, 303, 315, 318,
```

<223> n = A, T, C or G

<222> 480, 486, 489, 492, 495, 498, 504, 507, 513, 516, 519, 525,
531, 534, 537, 540, 546, 549, 555, 558, 561, 567, 570, 573,
576, 579, 582, 585, 588, 591, 594, 597, 600, 603, 606, 609,
612, 615, 618, 624, 633, 636, 639, 654, 663, 675, 678

<221> misc feature

<223> n = A, T, C or G

<222> 942, 951, 957, 963, 966, 978, 981, 984, 993, 996, 999, 1008,
1011, 1014, 1023, 1041, 1044, 1047, 1050, 1068, 1071, 1077,
1080, 1086, 1089, 1095, 1098, 1107, 1113, 1116, 1122, 1131,
1134

 $\langle 220 \rangle$

<222> 1143, 1146, 1155, 1158, 1167, 1170, 1173, 1176, 1179, 1182,
1185, 1191, 1197, 1200, 1203, 1206, 1209, 1212, 1218, 1221,
1227, 1239, 1245, 1248, 1257, 1272, 1278, 1281, 1284, 1287,
1290, 1296, 1299, 1305, 1311, 1314, 1317, 1320, 1326

<221> misc feature

<222> 1329, 1335, 1341, 1344, 1347, 1350, 1353, 1368, 1371, 1374,
1377, 1380, 1386, 1398, 1407, 1413, 1416, 1422, 1428, 1437,
1443, 1449, 1452, 1461, 1464, 1467, 1473, 1476, 1479, 1482,
1491, 1503, 1509, 1512, 1515, 1518, 1524, 1527, 1530

<221> misc feature

<222> 1536, 1539, 1542, 1548, 1551, 1554, 1557, 1560, 1563, 1566,

1572, 1581, 1584, 1587, 1590, 1599, 1602, 1605, 1608, 1614,
1620, 1623, 1626, 1632, 1635, 1638, 1641, 1644, 1647, 1653,
1656, 1659, 1662, 1665, 1671, 1680, 1683, 1686, 1689
<223> n = A,T,C or G

<221> misc_feature

<222> 1701, 1704, 1707, 1710, 1713, 1716, 1719, 1722, 1734, 1740,
1749, 1752, 1755, 1758, 1761, 1764, 1770, 1776, 1782, 1785,
1788, 1791, 1794, 1797, 1800, 1806, 1809, 1812, 1815, 1818,
1821, 1824, 1827, 1830, 1833, 1836, 1839, 1842, 1848
<223> n = A,T,C or G

<221> misc_feature

<222> 1851, 1857, 1860, 1863, 1866, 1872, 1878, 1887, 1896, 1902
<223> n = A,T,C or G

<400> 3

atggcnggng gnwsngcnac nacntggggn tayccngtng cnytnytnyt nytngtngcn 60
acnytnngny tnggnmgntg gytnccarccn gayccnggny tnmgnccayws ntaygaytgy 120
ggcnathaaarg gnatgcaryt nytngtntty ccmngnccng gncaracnyt nmgnnttyaar 180
gtngtngayg arttyggnaa ymgnttygay gtnaayaayt gywsnathtg ytaycaytgg 240
gtnacnwsnm gncncarga rccngcngtn ttywsngcng aytaymgngg ntgycaygtg 300
ytngaraarg ayggnmgntt ycayytnmgn gtnttyatgg argcngtnyt nccnaayggg 360
mgngtngayg tngcncarga ygcncnytn athtgyccna arccngaycc nwsnmgnacn 420
ytngaywsnc arytnngcnc nccngcnatg ttywsngtnw snacnccnca racnytnwsn 480
ttyytnccna cnwsnggnc yacnwsncar ggnwsnggnc aygcnttycc nwsnccnytn 540
gayccnggnc aywsnwsngt ncayccnccn ccngcnytn cnwsnccngg nccnggncn 600
acnytnngcna cnytnngcna rccncaytgg ggnacnytn arcaytggga ygtnaayaar 660
mgngaytaya thggcnacna yytnwsncar garcartgyc argtnngcns nggncayytn 720
ccntgyathg tnmgnmgnc nwsnaargar gcntgyarc argcnggntg ytytaygay 780
aayacnmng argtnccntg ytaytayggg aayacngcna cngtnccartg yttymngay 840
ggntayttyg tnytngtngt nwsncargar atggcnytna cncaymgnt hacnytnngc 900
aayathcay tngcntaygc nccnccnwsn tgywsnccna cncarcayac ngargcntty 960
gtngtnttyt aytyccnytn nacncaytgy ggnacnccna tgcargtngc nggngaycar 1020
ytnathtayg araaytgyt ngtnwsngg athcayathc araarggnc ncarggnwsn 1080
athacnmng aywsnccntt ycarytnccay gtnmgntgy tnttyaaygc nwsngayty 1140
ytncnathc argcnwsnat httyccnccn ccnwsnccng cncnccatgac nccarccngg 1200
ccnytnmgny tngarytnmg nathgcnaar gaygaracnt gywsnwsnta ytayggngar 1260
gaygaytayc cnathgtng nytnytnmgn garccngtnc aygtngargt nmgnnytnyt 1320
carmgnacng ayccnaayt ngtnytnyt ytnccaycart gytggggngc nccnwsngc 1380
aayccnttyc arcarnccna rtggccnath ytnwsngay gntgyccntt yaarggngay 1440
wsntaymna cncaratggt ngcnytnay gngcncacn cnttycarws ncaytaycar 1500
mgnttyacng tngcnacntt ygcnytnyt gaywsnggnw sncarmngc nytnmgngg 1560

ytngtntayy tnttytgyws nacnwsngcn tgyacayacnw snggnytnga racntgywsn 1620
 acngcntgyw snacnggnac nacnmgncar mgnmgnsnw snggncaymg naaygayacn 1680
 gcnmgncnc argayathgt nwsnwsnccn ggncngtng gnttygarga ywsntayggn 1740
 cargarccna cnytnggncc nacngaywsn aayggnaayw snwsnytnmg nccnythytn 1800
 tgggcngtny tnythytncc ngcngtngcn ytngtntyng gnttyggngt nttygtnggn 1860
 ytnwsncara cntgggcnc raarytntgg garwsnaaym gncar 1905

<210> 4

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer ZC29717

<400> 4

aaaaggggcc acagggttc 19

<210> 5

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer, ZC29869

<400> 5

tctcggagca gcctcacgat g 21